

## Bridging the financial divide: an in-depth analysis of gender disparities in access to resources among smallholder farming households in Punjab, Pakistan

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This study delves into the gender disparities concerning access to and management of financial resources among smallholder farm households in Muzaffargarh and Okara districts, Punjab. As part of the Australia-Pakistan collaborative initiative "Strengthening Vegetable Value Chains for Greater Livelihood Benefits" (SVVCP), data were collected in 2019 from 87 households. The findings illuminate significant gender disparities in household savings and the allocation of financial resources across both districts, highlighting entrenched inequalities within the financial realm. These results underscore the imperative for targeted interventions tailored to enhance economic and social well-being in rural communities.

**Keywords:** Smallholder farming households, financial resources, gender disparities, household savings, formal loans.

### INTRODUCTION

Despite Pakistan's significant progress in reducing the gender gap in many development indicators, it still stands far from achieving gender parity (World Economic Forum, 2022). This paper aims to assess the gender access gap in financial resources within small farming households in Muzaffargarh and Okara districts of Punjab as part of the Australia-Pakistan collaborative project "Strengthening Vegetable Value Chains in Pakistan for Greater Community Livelihood Benefits (SVVCP)." This study explores the various challenges small-scale vegetable farmers face, especially women. To effectively address these issues, it is essential to engage with the households of the targeted beneficiaries right from the start of the project.

The SVVCP was a component of the Agriculture Value Chain Collaborative Research Program (AVCCR), through which the Australian Government is supporting continued support in Pakistan. The SVVCP was designed as a horticultural project with a strong social research component to benefit the rural poor significantly and equitably, particularly women living in the Punjab and Sindh, for three selected vegetable crops, i.e., tomato, potato, and onion. The SVVCP was implemented through Centre for Agriculture and Bioscience International (CABI, Pakistan, from 2018 to 2022 in collaboration with the Pakistan Agricultural Research Council (PARC), University

of Agriculture Faisalabad (UAF), Sindh Agriculture University (SAU), and Agriculture Extension, Punjab, and Sindh. The project aimed to improve household income and livelihoods of resource-poor communities by understanding local norms, values, and cultures to integrate women into vegetable value chains and reduce the gender gap regarding knowledge and capacity building.

Women constitute 49 per cent of the population, with two-thirds residing in rural areas. The participation of women in the formal labour force is very low, at only 22 per cent, compared to 78 per cent of the male labour force (Pakistan Bureau of Statistics, 2018). The majority of the rural population, nearly 85 per cent, consists of smallholder farm families owning less than 12.5 acres of land (Akmal, 2021; Akhtar et al., 2021) and face significant challenges to accessing education, healthcare income generation opportunities, assets, and productive resources (land and credit), and various services such as extension services leading gender disparities (Taj, 2019; Nosheen, 2010). Women lack access to and control over productive assets and depend on men for their livelihood (Thomas et al., 2016). The Food & Agriculture Organization (FAO, 2022) aggregated data revealing that more than 40 per cent of women work in the agriculture sector in developing countries and globally. The contribution of women in South Asian agriculture is higher than men, but it remains unrecognised

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and unappreciated. Similarly, their work's economic and social value is often unrecorded, underestimated, and unpaid (Taj, 2019), resulting in less access to financial resources and decision-making. The significance of reducing the gender gap in financial access and control over productive resources for agricultural value chains is well documented in literature worldwide (Arshad, 2023; George and Thomachan, 2018; Siddik, 2017; Zulfiqar, 2017). This research aims to identify the gender gaps in access and control over financial resources to understand, integrate, and mainstream gender research and development into selected vegetable value chains and devise the best-fit practices for reducing the gender access gap to financial resources.

This paper relies on the data collected through a baseline survey of SVVCP from smallholder farming households in two districts of Punjab, Muzaffargarh and Okara, known as prominent regions for tomato and potato cultivation. Despite the significant contribution of women to smallholder agriculture, they face numerous obstacles that impede their ability to access financial resources to improve their livelihoods. Both men and women from smallholder farming families work together on their farms. In smallholder farming families, both men and women collaboratively contribute to most crop and livestock production practices. However, the persistent gender access gap to financial resources in such households is widespread, reflecting the unequal distribution of resources essential for survival, growth, and development at both individual and household levels. The higher poverty among women results from their limited access to necessities for living, such as food, income generation opportunities, and land (Sheheli, 2012) in the patriarchal family systems. Gender inequalities exist regarding access to land, labour, assets, credit, and infrastructure (Madrigal and Torero, 2016). The financial resources constitute money, liquid assets, and access to credit sources and savings, which are important determinants of an individual's and household's sustainable livelihoods. More importantly, individual or household livelihood depends on sustainable availability and access to financial resources. Therefore, equitable access to and control over financial resources is key to gender empowerment at the household level and enhances the family's quality of life (Malapit *et al.*, 2020). Accessibility and control over financial resources are pivotal determinants of an individual's or household's livelihood. However, it is noteworthy that female labour force participation declined by 1.9 per cent during 2022, with a downturn in workers in senior and professional categories. This leads to unequal gender access to financial resources.

The present research aims to analyse gender disparities in resource access among smallholder farming households in Punjab, Pakistan. Gender gaps in the selected project sites in Punjab have not been documented. Moreover, existing research underscores the importance of gender roles in the various contexts of the selected crops and attempts to

highlight the opportunities where these gaps can be bridged under the SVVCP in smallholder farm households in Punjab, Pakistan. This gender analysis will lead to new knowledge in gender and social studies and add a new dimension of gender gap analysis to the existing knowledge. Compared with the previous work, this paper has some novelty by applying gender comparison indicators to identify gender inequalities to access and control financial resources in two districts.

## MATERIALS AND METHODS

### *Sample Selection Criteria for Smallholder Farming Households:*

The data for this research were collected through a baseline survey conducted as part of the Australia-Pakistan collaborative project "Strengthening Vegetable Value Chains in Pakistan for Greater Livelihood Benefits in Pakistan" which has been implemented from 2018 to 2022. Smallholder farming households were selected based on a purposive random sampling technique. The rationale behind employing a purposive strategy stem from the premise that considering the goals and objectives of the SVVCP, smallholder farming households, forming the majority of the farming community in Pakistan, may possess distinct and significant insights and need to integrate into the project intervention. Furthermore, it aims to identify the opportunities for the inclusion of women in the tomato and potato value chains to strengthen their financial, social, and economic well-being. As a result, it became imperative to incorporate such individuals into the sample to ensure a comprehensive exploration of the subject matter (Campbell *et al.*, 2020). The household selection was purposive, focusing on those owning less than 12.5 acres of land and engaged in selected vegetable value chains. This method allowed for intentional selection, considering specific criteria such as landholding size (less than 12.5 acres) and a willingness to participate in the project activities. In consultation with partners and local agriculture extension officials, the collaborating project team played a vital role in identifying potential small farmers in Muzaffargarh and Okara. Thus, two villages from each district were selected in consultation with the project partners, i.e., Mojaz Foundation, CABI Pakistan, and local Agriculture Extension department officials.

Following the purposive sampling technique, 15-30 households were selected from each village. Overall, 176 respondents from smallholder farmer households were interviewed in both districts (Table 1). The quantitative data was collected through a household survey, and 45 male and 52 female tomato farmers from district Muzaffargarh and 42 male and 37 female potato farmers from district Okara participated in the baseline survey (Table 1). One male (head of the household) and one female (spouse), the principal couple involved in household decision-making from each household, were interviewed. This mode of data collection was carried out to examine the differentiated views on access



and control over the financial resource's objective and an inductive lens to assess specific gender empowerment indicators at the household level. In this paper, the discussion is focused on gender access to financial resources. There are several sources of financial resources. This research mainly focuses on the financial resources used for and gained from the business, which is mainly agriculture, non-farm employment, and external sources that include savings, sale of assets (such as animals), rents, pensions, loans (both from formal and informal sources like money lenders, family, and friends). An exploratory research method was used to explore the existing sources of financial resources in rural households to study and assess the gender inequalities in accessing financial resources. Descriptive statistical analysis and percentages were performed on Statistical Package for the Social Sciences (SPSS) for quantitative data. A cross-case analysis was done to compare results between districts and examine the gender disparities/gap in access to finances and control over resources.

The structured questionnaire employed in this study aimed to gather comprehensive information on various aspects related to smallholder farming households. The questionnaire covered demographics, agricultural practices, financial resources, decision-making processes, and participation in the vegetable value chains. The questions were carefully designed to elicit specific and relevant responses to the research objectives. An extensive training program was conducted for enumerators to ensure the reliability and validity of the research instruments. The questionnaire underwent pretesting, and a field visit with a test questionnaire filled by each enumerator was carried out. This process aimed to enhance the quality of data collection and validate the research instrument.

**Table 1. Sample size.**

District	Male	Female	Overall
Muzaffargarh	45	52	97
Okara	42	37	79
Total	87	89	176

## RESULTS AND DISCUSSION

**Socio-economic Characteristics of the Respondents:** Socio-economic characteristics include age, education, family size and type, number of family farm and off-farm workers, family income sources, and tenancy status of the respondents. The results in Table 2 demonstrate that both men and women belonged to the middle age group ranging from 40-43 years of age in both districts, indicating the most productive and energetic part of life. The average family size was seven persons, with the majority living as a nuclear family. The level of education of women respondents from both districts was far below that of men; most women, 87 and 70 per cent, were illiterate compared to only 20 and 10 per cent of men in

Muzaffargarh and Okara, respectively. Low literacy levels remain critical in limited work opportunities, especially for women, except for agricultural labour (Jabeen *et al.*, 2020). However, agriculture remains the primary source of employment for both men and women in both districts. However, women's engagement in agriculture as full-time workers was higher in district Muzaffargarh, 71 per cent, compared to only 40 per cent in district Okara (Table 1). This may be linked with the smaller land, holding only 7 acres in district Muzaffargarh, and less ownership of agricultural lands, only 28 per cent, than district Okara, 70 per cent. The majority of the farmers operate as owner-cum tenants and tenants in district Muzaffargarh, where both males and females of the households work collaboratively to save labour costs on various crops and livestock activities. Meanwhile, in district Okara, the average land holding was higher, 12.5 acres, with 70 per cent owner-operators. Tenants and sharecroppers account for 27 and 5 per cent of Muzaffargarh and Okara, respectively, indicating that the mode of agricultural production is no longer feudal and has been commercializing (Akhtar *et al.*, 2021)

Financial resources are inevitable for survival, growth, and development at an individual, household, and community level. It is evident in the literature that women and girls have unequal access to healthcare, education, and employment, with adverse consequences for their liberties (Morsy, 2020). However, significant improvements with the highest positive variation in economic participation and opportunity were recorded in Pakistan (Maertens and Swinnen, 2012). However, rural women's off-farm work was negligible in both districts due to limited opportunities for off-farm work for women in the area (Table 2). Furthermore, the results indicate that most smallholder farming households' incomes are derived through agriculture production in both districts. Labour (including farm and non-farm activities) also contributed significantly to household income. About half of the household income came from these sources. In district Muzaffargarh, non-farm labour and non-farm businesses such as general stores were also significant contributors to household income. There are also inter-district differences regarding the income from livestock. In district Okara, livestock contributes more to the household's total income, while livestock contributes minimally towards household income in district Muzaffargarh. It is worth noting that women have more access to income from livestock compared to crops and vegetables (Taj *et al.*, 2012). The observed variances in income sources across different districts can be attributed to variations in land holdings and tenancy statuses. Specifically, in the district of Muzaffargarh, the average landholding is relatively small, predominantly subsistence-level, and insufficient to fulfil the income requirements of local families. This limitation in land size also restricts the capacity to maintain a more significant number of livestock. Consequently, families of smallholder farmers predominantly



engage in non-farm labour activities such as construction work, brick kiln jobs, and daily wage labour in nearby areas to supplement their income. In district Okara, the average land holding of the farmers was higher, which helps farmers to grow other crops such as maize, wheat, and fodder for livestock; therefore, the contribution of the crops and livestock to family income was higher in district Okara (Table 2).

**Table 2. Socio-economic Characteristics of the Respondents.**

Socio-economic characteristics of the respondents	Muzaffargarh		Okara	
	Male	Female	Male	Female
Age	40	44	41	43
Education				
- Illiterate	20	87	10	70
- Primary	30	11	20	19
- Middle	20	02	20	8
- Matric & above	30	--	50	3
Involvement in farming				
- Full time	71	91	58	40
- Part-time	29	09	42	60
Family farm workers (Nos.)	1	1	1.4	0.44
Family off-farm workers (Nos.)	0.75	--	0.41	--
Family size	7		7	
Family type (nuclear %)	60		61	
Households' income sources				
- Agriculture	47		69	
- Farm labour	26		17	
- Agriculture & labour	15		11	
- Agriculture & service	12		3	
- Livestock	25		--	
Tenancy status (percent)				
- Owner	28		70	
- Owner-cum tenant	33		24	
- Tenant	39		6	
Landholding (acres)	7		12.5	

**Gender access gap to various financial resources:** The gender gap in accessing financial resources is a significant concern worldwide. Achieving gender parity in financial inclusion is a pivotal mechanism for promoting gender equality- one of the 17 Sustainable Development Goals adopted by the United Nations. This is significant at the micro level as it elevates the quality of life for women by amplifying their agency and enhancing their capacity for informed decision-making. Research indicates that women are more likely to be excluded from the formal financial sector in developing world (Morsy, 2020), creating a considerable gender access gap to financial resources. The persistent gender gap in financial access affects women's economic empowerment and their ability to invest in their businesses and households.

In the context of smallholder farming households in Punjab, Pakistan, this research aims to evaluate the gender access gap across various financial resources such as credit and savings

and control over them. The results revealed notable gender access gaps to various financial resources in districts Muzaffargarh and Okara, Punjab. The data were collected on five financial resources: savings through a bank account, self-help groups, control of household savings, obtained loans from formal and non-formal sources, and utilisation of loans- highlighted significant differences between male and female respondents (Table 3). For instance, only a small percentage of female respondents reported savings through a bank account compared to male respondents in both districts. Additionally, there is a marked gender difference in access to formal financial sources such as banks, with a higher reliance on informal sources among women.

The results indicate that women respondents accessed self-help groups called "Committee" more in both districts, with 27 per cent of female respondents in Muzaffargarh and 33 per cent of female respondents in Okara accessing these groups (Table 3). Notably, informal saving groups, based on trust and long relationships of neighbours, are commonly used in most rural and urban areas. They also allow women to collaborate with others at the neighbourhood/community level. Furthermore, the study sheds light on the factors contributing to this disparity, including limited savings capacity among small-scale farming households and the urban-centric location of banks, which hinders accessibility for rural residents, particularly women. As a result, women tend to favour informal savings mechanisms such as self-help groups, which provide a convenient alternative without stringent formalities. This aligns with existing literature documenting women's preference for informal savings to exercise agency (Deschênes *et al.*, 2020).

Furthermore, the analysis revealed the limited gendered financial inclusion due to various socio-economic and cultural factors in women's financial exclusion that align with the existing literature (World Bank, 2009; Malapit and Quisumbing, 2015). The identified factors contributing to this disparity are two-fold: firstly, households engaged in small-scale farming exhibit limited capacity for savings; secondly, banks are predominantly situated in urban areas, thereby rendering them less accessible to rural residents, particularly women with low literacy levels and restricted mobility may encumber. As a result, women in both districts were inclined towards savings via self-help groups or committees, which provide a convenient and accessible alternative without formalities (Table 3). These findings correspond with extant literature documenting women's tendency towards informal savings behaviour to achieve agency. All these reasons made the women interested in informally saving money in community self-help groups. This also agrees with the secret saving behaviour of women to acquire agency reported in the literature (Deschênes *et al.*, 2020).

Similarly, gender dynamics and attitudes towards access and control over resources also determine how different individuals in the family (men and women) value, own,





accumulate, control, and make use of different resources, which are vital to strengthening women's role as producers and seek better opportunities to support their economic participation (Fletschner and Kenney, 2014). These findings are also consistent with (Ukwuaba *et al.*, 2020), who found that most formal credit is offered to large and medium-scale farmers due to their potential to provide collateral. Therefore, informal sources such as NGOs and commission agents play a significant role in providing credit, particularly for women, underscoring the importance of flexible and accessible financial services tailored to the needs of smallholder farmers, consistent with prior research (Fletschner and Kenney, 2014). Most households in district Muzaffargarh also seek loans from commission agents for agricultural inputs. As commission agents were easily accessible, there were no problematic formalities, and they mostly paid off at the harvest of their crops, which was more convenient for farmers. However, loans from non-governmental organisations, mainly from the Mojaz Foundation, were the primary source of credit for women, and about 45 per cent of smallholder families availed of loans from the NGO (Table 3).

**Table 3. Gender Access Gap Analysis to Various Financial Resources (Percent).**

Financial Resource	Muzaffargarh		Okara	
	Male	Female	Male	Female
Savings through				
Bank account (Yes %)	5.2	05	18.2	13
Self-help group (Yes %)	22	27	13	33
Control of household savings by				
Male	40	20	70	50
Both (joint)	60	80	30	50
Obtained credit from				
Formal sources	14	05	33	13
Non-formal sources (NGOs, commission agents, family and friends)	86	95	67	87
Utilisation of loans by				
Male	50.0	10	86	40
Both (joint)	50.0	90	14	60

Similarly, more women recorded borrowing loans from informal sources such as friends, relatives, and neighbours than men. This agrees with women's behaviour of borrowing from informal sources to reduce women's work burden by allowing them to make time-saving choices and get more time for productive work. Access to formal credit also varies between districts, with Okara exhibiting higher rates than Muzaffargarh (Table 3). Most smallholder farming households need credit at the critical stages of crop production, and non-availability at the proper time leads to less use of inputs and low production. Therefore, access credit enhances the farm business and improves the income of smallholder farmers (Rehman *et al.*, 2019). However, small

farmers, especially women, lack access to formal loans. Building upon these findings, the study recommends future research directions focusing on emerging themes within digital finance, financial self-efficacy, and financial literacy to enhance women's financial inclusion.

**Conclusion:** This study underscored the critical importance of addressing the gender gap in accessing financial resources, particularly in the context of smallholder farming households in Punjab, Pakistan. The findings reveal significant disparities between male and female respondents regarding access to formal financial institutions, savings mechanisms, and credit sources. These gender differences impede women's economic empowerment and limit their ability to invest in their businesses and households. The research highlights the multifaceted factors contributing to this gender gap, including limited savings capacity among small-scale farming households, urban-centric banking infrastructure, and socio-cultural norms that constrain women's financial autonomy. Despite these challenges, women demonstrate resilience by utilising informal savings mechanisms and accessing credit through alternative channels such as NGOs and commission agents. Therefore, prioritising interventions to enhance women's financial inclusion and autonomy is inevitable. This includes targeted initiatives to improve financial literacy, promote digital financial services, and expand access to formal credit for women in rural areas. Moreover, addressing broader socio-cultural norms perpetuating gender inequalities is essential for creating an enabling environment for women's economic participation. Furthermore, there is a need for continued research and action to advance gender equity in financial inclusion and create more inclusive and equitable economic systems.

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